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ABSTRACT

This study examined the effects of children's pre-kindergarten literacy environments away from home on their knowledge of print-related concepts. Data were collected at eight sites in Mississippi, Texas, and Louisiana--either day care centers with no established curriculum or formal instruction, or classrooms with adopted curricula within parochial or public schools. The Concepts About Print (CAP) assessment instrument was given to 78 five-year-olds at the sites, and the Inventory of Literacy Indicators (ILI) was used to assign each site a quality and quantity rating representing the availability of literacy materials. ILI scores ranged from 14.30 to 70.60 on a 90-point scale, and the CAP score means ranged from 7.70 to 14.64 on a 24-point scale. There was no significant relationship between a site's total ILI score and the CAP scores of the children at the eight sites. ILI quality and quantity scores were highly correlated; therefore, the independent effect of these variables on CAP scores could not be determined. There were significant differences among the sites on children's mean CAP scores. (Two appendices list the items on the CAP and the ILI. Contains 34 references.) (KDFB)

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Running head: LITERACY RICH ENVIRONMENTS AND CONCEPTS ABOUT PRINT

The Effect of a Literacy-Rich Environment on Children's Concepts About Print

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ED 399 043

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Abstract

The purpose of this study was to examine the effects of children's pre-kindergarten literacy environment on their knowledge of print related concepts. The Concepts About Print (CAP) assessment instrument was administered to 78 five-year-old children at eight sites in three states. In addition, the Inventory of Literacy Indicators (ILI) was used to assign each site a quality and a quantity rating representing the availability of literacy materials.

A Pearson product moment correlation calculation determined that no significant (r (1, 76), p = .80) relationship existed between a site's total ILI score and the CAP scores of the children (n=78) at the eight sites. Results from a one-way analysis of variance revealed a significance (F (7, 70) = 5.12, p = .0001). Scheffe's test indicated that significant differences for site means on CAP scores occurred between Site 2 (M = 14.64) and Site 3 (M = 8.5), Site 2 (M = 14.64) and Site 7 (M = 7.70), and Site 2 (M = 14.64) and Site 8 (M = 8.70).

These findings suggest that factors other than the quantity and quality of literacy materials in the child's pre-kindergarten environment away from the home influence his or her knowledge of print related concepts. This is evidenced by the fact that the children at Site 7, who were identified as having similar, prior educational experiences, were the most homogeneous on CAP scores. Therefore, it appears that the variable related to the difference in CAP mean scores is the child's exposure to and interaction with literacy enhancing materials available in the home environment.

Introduction

From birth, children are witnesses to the existence of print and the relationship between print and people (Hall, 1987). Literacy learning begins in infancy and continues with children acquiring considerable print related knowledge during the preschool years (Hiebert, 1981; Lomax & McGee, 1985; Teale & Sulzby, 1991). Sulzby and Barnhart (1992) argue that reading and writing should be taught by expanding and nurturing this early literacy, enabling young children to develop conventional literacy.

Young children learn about language as they are involved in social interactions that require them to send and receive messages (Isbell, 1989). Isbell urges the immersion of infants, toddlers, preschoolers, and kindergartners in environments filled with numerous opportunities to actively use language, to enjoy books, and to record their ideas in their own way. Both the National Association for the Education of Young Children (Schickedanz, 1983; 1986) and the International Reading Association (IRA, 1986) have published materials that summarize current knowledge about children's language acquisition from birth to age six. These documents suggest that adults create environments where young children can (a) see and hear adults read, write, and converse in their daily lives; (b) read, write, speak, and listen in spontaneous, meaningful situations with adults and other children; and (c) engage in print-related activities during play (Kontos, 1986).

Schuele, Roberts, Fitzgerald and Moore (1993) acknowledge the significance of the home and family environment as a context for literacy learning, while recognizing the increased importance of child care centers and preschools as sources of learning experiences for children. Holdaway (1979) found that the environment created by a natural abundance of literacy materials in the homes of many early readers is also appropriate for child care and school based settings.

According to Hall (1987), evidence that young children pay attention to the literacy-based elements in their environments is extremely clear and consistent. Early childhood settings should provide a supportive environment for learning where children can build a positive attitude toward themselves, language, and literacy. The physical arrangement and materials provided at the site where children spend time away from home play an important role in setting the stage for learning language (Tompkins & Hoskisson, 1991). This environment should allow young children to actively participate in meaningful, functional encounters with language including opportunities for listening, speaking, reading, and writing (IRA, 1986). Providing special areas and materials for enhancing language nurtures literacy development as an integral part of the curriculum. Through careful preparation of materials and settings, literacy is fostered in an environment that encourages voluntary, functional uses of reading and writing (Morrow, 1989; Strickland & Morrow, 1989).

> Sulzby and Barnhart (1992) describe a literacy-rich environment in the following way: Materials are at children's reach and there is sufficient time during the day for children to interact with those materials. Reading and writing become less visible as separate activities and become more deeply embedded in other aspects of classroom life. (p. 125)

A literacy-rich environment has features that promote and encourage children to interact with language by providing opportunities and materials for listening, speaking, reading, and writing (Heilman, Blair, & Rupley, 1994).

The purpose of this study was to examine the effects of children's pre-kindergarten environment away from home on their knowledge of concepts related to print. Specifically, the research question addressed in this study was: Does the quantity and quality of literacy materials

present in a child's pre-kindergarten environment away from home predict his or her score on the Concepts About Print assessment?

Methodology

Subjects

The subjects in this study consisted of 78 five-year-old children from eight early childhood sites located in three states. The distribution of subjects among sites is presented in Table 1. Females (36) accounted for 46.1% of the subjects while males (42) accounted for 53.9%. Sixty-nine (88.5%) subjects were Caucasian, and six (7.7%) subjects were African American. The remaining three subjects represented three different ethnic groups.

Five of the sites were day care centers servicing children from infancy through age five with limited after school care for older children. Site 1, Site 2, Site 3, and Site 4 were located in the same southern Mississippi town while Site 8 was located in a town of similar population in west Texas. There was no established curriculum or formal instruction at these five locations, and teaching positions were held by non-degree personnel. One of these centers was a national franchise while the other four were local, independently owned businesses.

Site 5 and 6 were two separate classrooms for four-year-old children within a parochial school in a Mississippi coastal town. The school served children from four-years-old to sixth grade. Instruction emanated from an adopted curriculum, and both teachers held a bachelor's degree in elementary education.

Site 7 was a classroom for four-year-old children, who had been identified as both low-income and at risk of academic failure, within a public elementary school a southern Lousiana town. The school served children from four-years-old to fifth grade. Instruction emanated from an

adopted curriculum, as well as state and federal guidelines. The teacher held a master's degree in early childhood.

Instrumentation

Data collection involved the use of two separate instruments. The Concepts About Print assessment instrument (Clay, 1977) was used to determine children's knowledge of print related concepts. The Inventory of Literacy Indicators was used to assess both the quality and quantity of literacy materials available at each site.

Concepts About Print (CAP)

In 1977, Marie Clay developed and individually administered the Concepts About Print (CAP) assessment instrument to five and six-year-old children in New Zealand. She devised the CAP to serve the following purposes: (a) to indicate students' individual differences, (b) to assess students' preparedness for a particular instructional program, (c) to aid in planning future instruction, and (d) to record students' progress during the first year of instruction (Clay, 1985). The CAP consists of 24 items and takes approximately ten minutes to administer. Subjects are awarded one point for each correct response while an incorrect response results in no points being awarded; therefore, possible scores on the CAP range from zero to twenty-four.

The Concepts About Print assessment was designed using a storybook format (Clay, 1989). The actual instrument consists of two booklets (Sand and Stones) that contain a short story told with narrative text on one page and a corresponding picture on the opposite page. Due to the proximity of most sites to the coast, Sand was chosen based on the assumption that the subjects would be familiar with a beach theme.

Table 1

Distribution of Subjects by Gender and Race Among Sites

	Mississippi						Lousiana	Texas	Total
	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	
Gender									
Males	4	4	6	1	7	5	5	5	36
Females	7	7	2	4	6	5	5	5	42
Total	11	11	8	5	13	10	10	10	78
Race									
Caucasians	10	11	7	5	5	11	10	10	69
African Americans	1	0	1	0	2	2	0	0	6
Other	0	0	0	0	3	0	0	0	3
Total	11	11	8	5	10	13	10	10	78

As the story is read to the child, he or she is requested to assist the reader by performing various tasks. Some of the concepts examined by the CAP include the child's ability to: (a) identify the front of the book; (b) recognize that print, not pictures, tells the story; (c) distinguish between a letter and a word; (d) match pairs of upper and lowercase letters; and (e) name types of punctuation marks and explain their uses. A copy of the CAP scoring standards is appended (Appendix A).

Inventory of Literacy Indicators (ILI)

A careful review of the literature resulted in nine areas being identified as essential for promoting literacy in an early childhood classrooms (McMahon & Howe, 1993): (a) library center; (b) listening center; (c) books and other reading materials; (d) writing center; (e) signs, labels, and directions; (f) materials for recording language; (g) written information about the current day; (h) student work displays; and (i) center area integration. The Inventory of Literacy Indicators (ILI) was developed to provide a quality rating and a quantity rating for the literacy materials in each of these nine areas (Appendix B).

Content validity of the ILI was determined by a panel of three experts knowledgeable in the fields of reading and early childhood education. Each expert on the panel indicated the extent to which each of the nine areas identified as essential for promoting literacy in an early childhood classroom was accurate and complete. Any item that received a content validity rating of less than 80% was revised or eliminated.

Face validity for the ILI was determined by a group of eight graduate students enrolled in an early childhood course. These students made comments and suggestions concerning the overall understandablitity of the ILI. The format, instructions, and vocabulary were evaluated. Adjustments were made based on the results of this critique.

Scoring of the ILI was based on a six-point rating scale. The quality rating scale ranged from not present (0) to excellent (5), and the quantity rating scale ranged from none apparent (0) to abundant (5). Scores for the nine areas were determined by averaging the individual ratings of each desired feature. An overall rating was determined by adding the nine area averages. The highest possible score on the ILI for each type of rating (quality and quantity) was 45 for a possible total of 90.

A pilot test using the ILI was conducted for the purpose of evaluating and strengthening the instrument. The researchers used the ILI to independently evaluate two different early childhood classrooms located in a university based child care center. Interrater agreement in this study was 98%.

Procedure

Directors or principals of sites providing service to five-year-old children prior to their entrance into kindergarten were contacted by phone. Each individual who indicated an interest in participating received a letter explaining the purpose of the study along with a set of parental consent forms and instructions for their distribution. One week after delivering these materials, completed consent forms were collected by the researchers.

Each child having parental consent was individually assessed using the CAP assessment instrument. The assessments at each site were completed by one of two researchers who made several visits over a two week period. During each visit, the literacy environment was closely observed. At the conclusion of the assessment period, the quantity and quality of literacy materials at each site was evaluated using the ILI.

Results

Descriptive data obtained for each of the eight sites on CAP score and ILI ratings is provided in Table 2. The CAP scores obtained from subjects at Site 2 yielded the highest mean (M = 14.64) while scores from Site 7 produced the lowest (M = 7.70). The largest amount of variance (SD = 5.93) occurred in scores from Site 4, and the least amount of variance (SD = 1.95) occurred in scores from Site 7.

Total ILI scores ranged from 14.30 (Site 8) to 70.60 (Site 7) on a 90-point scale. The ratings on the quality and quantity sections of the ILI are quite similar across each of the eight sites. Site 7 received the highest quality (36.60) and quantity (34.00) rating while Site 8 received the lowest quality (7.38) and quantity (6.92) rating.

The semi-partial multiple regression technique was used to test the independent effect of the quality and quantity of available literacy materials on the criterion variable of CAP scores. No significant (F (1, 76) = .10, p = .76) independent relationship was found for quantity ratings, due to their high correlation with the quality ratings. The quality rating was not entered into the analysis, as the tolerance values were reached. These results suggest that the quality and quantity ratings were correlated to such a high degree that it prevents an independent relationship.

As a result of this high correlation between the quality and quantity ratings, a Pearson product moment correlation was calculated to determine the relationship between total ILI scores (quality rating + quantity rating) and the criterion variable of CAP scores. No significant relationship (r^2 (1, 76), p = .80) was found between a site's total ILI score and the CAP scores of the children at the site.

Total ILI scores were used to classify each site into groups according to the degree to which the environment was literacy-rich, i.e., low literacy environment group and high literacy environment group. The six sites with a score of 45 or less were placed in the low literacy environment group, and the two sites with a score greater than 45 were placed in the high group. The mean (M = 11.07) for CAP scores obtained from subjects in the high literacy environment was almost identical to the mean score (M = 11.33) obtained from subjects in low literacy environment. These means suggest that there is no significant difference between CAP scores of children in high literacy pre-kindergarten environments away from home and children in low literacy pre-kindergarten environment away from home.

Table 2

Descriptive Data Representative of Centers

	Concepts About Print			Inventory of Literacy Indicators		
	Number of Cases	Mean	Standard Deviation	Environment Rating	Resource Rating	Total Score
Site 1	11	11.27	3.41	10.00	9.90	20.00
Site 2	11	14.64	3.33	35.63	33.00	68.63
Site 3	8	8.50	3.46	10.87	8.11	18.98
Site 4	5	11.80	5.93	14.70	15.00	29.70
Site 5	10	12.60	2.46	9.32	8.21	17.53
Site 6	13	12.85	3.78	8.10	8.20	16.30
Site 7	10	7.70	1.95	36.60	34.00	70.60
Site 8	10	8.70	3.77	7.38	6.92	14.30
Total	78	11.14	4.06			

A one-way analysis of variance (Table 3) was conducted to determine any differences between sites' means on the criterion variable of CAP scores. A significance (F (7, 70) = 5.12, p = .0001) was obtained. Table 4 presents the results of post hoc comparisons. Scheffe's test indicated that a significant difference for mean CAP scores was found between the CAP scores for Site 2 and each of the three sites (Site 3, Site 7, and Site 8).

Table 3

Results of a One-way ANOVA Between Sites on Concepts About Print Scores

ANOVA Table

Source	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	7	429.6291	61.3756	5.1157	.0001
Within Groups	70	839.8196	11.9974		
Total	77	1269.4487			

Table 4

Results of Post Hoc Comparison (Scheffe's) Between Sites on Concepts About Print Scores

Group	Mean	Standard Deviation	Grp 7	Grp 3	Grp 8
Grp 1	11.2727	3.4085			
Grp 2	14.6364	3.3248	*	*	*
Grp 3	8.5000	3.4641			
Grp 4	11.8000	5.9330			
Grp 5	12.6000	2.4585			
Grp 6	12.8462	3.7826			
Grp 7	7.7000	1.9465			
Grp 8	8.7000	1.1930			

Discussion

Lack of significance between a site's total ILI score and the CAP scores of the children at the site suggest that either a five-year-old child's knowledge of print related concepts is not significantly influenced by the quality and quantity of literacy materials available in his or her pre-kindergarten environment away from home or is not measurable. This lack of significance may be attributed to either the relatively short amount of time spent at the observed site in comparison with the time spent in the home or the difficulty in measuring the independent influence of the two environments. Similarly, significant differences between mean CAP scores at three pairs of sites suggest that children's knowledge of print related concepts differ as a result of a variable other than the quality and quantity of literacy materials in the site environment. It appears that the variables related to this difference are the quality and quantity of literacy materials available in the home and the child's interaction with these materials. The interpretation suggesting infuence of the home environment is evidenced by CAP scores of children at Site 7, who were identified as having similar, prior educational experiences, being most homogeneous.

It is important to note that those children in a high literacy-rich environment (Site 2) whose backgrounds did not identify them as being at risk of academic failure had the highest mean CAP score of the eight sites in this study. A possible explanation of this finding is that children who are not disadvantaged by absence of early literacy experiences benefit from the elements of a literacy rich environment in pre-kindergarten sites. It is possible that continuous exposure to literacy rich environments may positively influence children's knowledge of print related concepts despite a lack of early literacy experiences in the home. An alternate explanation may be that parents who provide a literacy-rich home environment choose a pre-kindergarten environment

away from home that possesses characteristics known to promote literacy development.

The findings from this study support the research (Heath, 1982; Leichter, 1984) and abundance of literature (Butler & Clay, 1966; Hall, 1987; Teale, 1986) that emphasizes the decisive impact of home environment on young children's knowledge of print related concepts. A literacy-rich home environment provides many opportunities for the facilitation of a vast array of print related knowledge and positively influences young children's literacy development. Literacy-rich pre-kindergarten environments can offer these same opportunities for young children.

Children's literacy development, therefore, should be a factor in designing pre-kindergarten environments (Morrow, 1980; Strickland & Morrow, 1989). Children lacking opportunities to interact with print in their homes rely on pre-kindergarten environments away from home for early literacy experiences, while children coming from literacy supportive backgrounds need continued exposure with an abundance of print in pre-kindergarten environments away from home. Early childhood sites should be designed with areas where students have opportunities for talking, exploring, writing, reading, and thinking comfortably by themselves or with others (Routman, 1991). Morrow (1989) provides the following list of guidelines for increasing the production of oral and written language in any classroom: (a) maintain an ample supply of materials for reading, writing, and oral language; (b) integrate materials that promote literacy development into content area learning centers; (c) provide functional experiences designed to emulate real-life situations; and (d) use the child's background and current knowledge as a foundation for learning.

Literacy-rich environments can vary greatly and can use a combination of any of the preceding characteristics (Tompkins & Hoskisson, 1991). Further studies are needed to

investigate the relationship between the quality and quantity of literacy materials available in environments away from home and young children's literacy development. It is recommended that these studies use subjects with similar home environments and/or children who have spent an extended period of time in a given environment away from home.

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Appendix A

Gender _____ **Race** _____

Scoring Standards		
Item	**Pass**	**Score**
1	Front of book	
2	Print (not picture)	
3	Points top left at *'I took...'*	
4	Moves finger left to right on any line	
5	Moves finger from the right-hand end of a higher line to the left-hand end of the next lower line, or moves down the page.	
6	Word-by-word matching.	
7	Both concepts must be correct, but may be demonstrated on the whole text or on a line, word or letter.	
8	Verbal explanation, or pointing to top of page, or turning the book around and pointing appropriately.	
9	Score for the beginning with 'The" and moving right to left across the lower line and then the upper line, OR, turning the book around and moving left to right in the conventional movement pattern.	
10	Any explanation which implies that line order is altered.	
11	Says or shows that a left page precedes a right page.	
12	Notices at least one change in word order.	
13	Notices at least one change in letter order.	
14	Notices at least one change in letter order.	
15	Says 'Question mark', or 'A question', or 'Asks something'.	
16	Says 'Period', or 'It tells you when you've said enough' or 'It's the end'.	
17	Says 'Period', or 'A Rest', or 'A comma'.	
18	Says 'That's someone talking', 'Talking', 'Speech marks', 'Print' (from computers).	
19	Locates two capital and two lower case letters.	
20	Locates the words "no" and "was."	
21	Locates one letter and two letters on request.	
22	Locates one word and two words on request.	
23	Locates both first and last letter of a word.	
24	Locates one capital letter.	
	Total	_____

APPENDIX B

INVENTORY OF LITERACY INDICATORS (ILI) ©

Quality Rating
0=not present 1=poor 2=fair 3=satisfactory 4=good 5=excellent

1. Library Center
_____ 1. partitioned off from other areas in the room
_____ 2. located in a quiet area
_____ 3. large enough to accommodate at least 4 children
_____ 4. warm, attractive and inviting
_____ 5. books are shelved by category and/or color-coded by type
_____ 6. books displayed in a variety of ways (e g., spines only, front covers, theme display)
_____ = _____ Average Score
6

2. Listening Center
_____ 1. area is set aside for students to listen to cassette recordings of favorite stories
_____ 2. story cassettes with accompanying books
_____ = _____ Average Score
2

3. Books and Other Reading Materials
_____ 1. books reflect many interests
_____ 2. books reflect different developmental levels
_____ 3. books are illustrated in a variety of ways
_____ = _____ Average Score
3

4. Writing Center
_____ 1. a space with tables or desks for writing and drawing
_____ 2. paper of all colors, shapes and sizes
_____ 3. pre-made booklets or book making materials
_____ 4. a variety of writing instruments (e.g., pencils, pens, colored pencils, markers, crayons)
_____ 5. chalk and chalkboards
_____ 6. calendar pictures, gift wrapping paper, catalogs, newspapers, or magazines
_____ 7. stencils, stickers, rubber stamps, or letters and numbers to trace, stick and arrange
_____ 8. dictionaries, word lists or word banks
_____ = _____ Average Score
8

5. Signs, Labels, and Directions
_____ 1. key objects and items are labeled with a printed name or a representative symbolic figure
_____ 2. displays of written language or pictures that provide instructions
_____ 3. displays of written language or pictures that locate materials
_____ = _____ Average Score
3

Quality Rating
0=not present 1=poor 2=fair 3=satisfactory 4=good 5=excellent

6. Materials for Recording Language
_____ 1. pencils, pens, paper, etc. are available to record children's language
_____ 2. student journals are used
_____ 3. a message center or class mailbox system is used for communication
_____ = _____ Average Score
3

7. Written Information about the Current Day
_____ 1. notices, announcements, a menu, or daily classroom schedule is posted
_____ 2. calendar activities or weather charts are used daily
_____ 3. sign-up sheets for ongoing activities or daily attendance charts
_____ = _____ Average Score
3

8. Student Work Displays
_____ 1. places that display children's work
_____ 2. children's work decorates the classroom
_____ 3. children's projects with written explanations are exhibited throughout the classroom
_____ 4. work from different children is displayed
_____ 5. work displayed is less than two weeks old
_____ = _____ Average Score
5

9. Center Area Integration
_____ 1. play areas are equipped with corresponding literacy materials and props (e.g., a cookbook or note pad for telephone messages in the housekeeping center)
_____ 2. contextual print, such as, food packages, note pads, menus, maps, mail, order forms, phone messages, shopping lists, telephone books, recipes, newspapers, and magazines, is included in various centers
_____ 3. a means of recording observations, accomplishments, or activities is present in areas other than the writing center
_____ = _____ Average Score
3

Quantity Rating
0=none 1=one 2=few 3=several 4=many 5=abundant

1. Library Center
_____ 1. elements of softness (e. g., cushions, throw rugs, pillows, stuffed animals, a rocking chair, sofa, or other comfortable furniture)
_____ 2. bookshelves
_____ 3. theme related books
_____ 4. posters or bulletin boards encouraging reading or telling about an author and his/her books
_____ 5. "literature props" (e.g., puppets, felt-board stories, a stage, or a roll movie)
_____ = _____ Average Score
5

Quantity Rating
0=none 1=one 2=few 3=several 4=many 5=abundant

2. Listening Center
_____ 1. individual copies of story book
_____ 2. story cassettes with accompanying books
_____ 3. genres of literature
_____ = _____ Average Score
3

3. Books and Other Reading Materials
_____ 1. information and content books
_____ 2. plays or poetry selections
_____ 3. student written books
_____ 4. magazines and newspapers appropriate for children
_____ 5. story books
_____ 6. dictionaries or other reference books
_____ = _____ Average Score
6

4. Writing Center
_____ 1. paper of all colors, shapes and sizes
_____ 2. pre-made booklets or book making materials
_____ 3. a variety of writing instruments (e.g., pencils, pens, colored pencils, markers, crayons)
_____ 4. chalk and chalkboards
_____ 5. calendar pictures, gift wrapping paper, catalogs, newspapers, or magazines
_____ 6. stencils, stickers, rubber stamps, or letters and numbers to trace, stick and arrange
_____ 7. dictionaries, word lists or word banks
_____ 8. computer or typewriter
_____ = _____ Average Score
8

5. Signs, Labels, and Directions
____ 1. key objects and items are labeled with a printed name or a representative symbolic figure
_____ 2. displays of written language or pictures that provide instructions
_____ 3. displays of written language or pictures that locate materials
_____ = _____ Average Score
3

6. Materials for Recording Language
_____ 1. pencils, pens, paper, etc. are available to record children's language
_____ 2. tape recorders, computers, typewriters, or for recording language
_____ = ____ Average Score
3

7. Written Information about the Current Day
_____ 1. notices, announcements, a menu, or daily classroom schedule is posted
_____ 2. calendar activities or weather charts are used daily
_____ 3. sign-up sheets for ongoing activities or daily attendance charts
_____ = _____ Average Score
3

Quantity Rating
0=none 1=one 2=few 3=several 4=many 5=abundant

8. Student Work Displays

_____ 1. places that display children's work

_____ 2. child-related displays consist of children's pictures, attempts at writing, or child-dictated stories with pictures

_____ = _____ Average Score
2

9 Center Area Integration

_____ 1 play areas are equipped with corresponding literacy materials and props (e.g., a cookbook or note pad for telephone messages in the housekeeping center)

_____ 2. contextual print, such as, food packages, note pads, menus, maps, mail, order forms, phone messages, shopping lists, telephone books, recipes, newspapers, and magazines, is included in various centers

_____ 3. a means of recording observations, accomplishments, or activities is present in areas other than the writing center

_____ = _____ Average Score
3

Quality Rating		Quantity Rating	
1	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____
4.	_____	4.	_____
5.	_____	5.	_____
6.	_____	6.	_____
7.	_____	7.	_____
8.	_____	8.	_____
9.	_____	9.	_____
Total	_____	Total	_____

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